

Casein Kinase I gamma-2 Protein, Human (sf9, His)

Cat. No.:	HY-P72873
Synonyms:	Casein kinase I isoform gamma-2; CKI-gamma 2; CSNK1G2; CK1G2
Species:	Human
Source:	Sf9 insect cells
Accession:	P78368 (M18-K415)
Gene ID:	1455
Molecular Weight:	Approximately 48 kDa

PROPERTIES

AA Sequence	<pre> M S K A G G G R S S H G I R S S G T S S G V L M V G P N F R V G K K I G C G N F G E L R L G K N L Y T N E Y V A I K L E P I K S R A P Q L H L E Y R F Y K Q L S A T E G V P Q V Y Y F G P C G K Y N A M V L E L L G P S L E D L F D L C D R T F T L K T V L M I A I Q L I T R M E Y V H T K S L I Y R D V K P E N F L V G R P G T K R Q H A I H I I D F G L A K E Y I D P E T K K H I P Y R E H K S L T G T A R Y M S I N T H L G K E Q S R R D D L E A L G H M F M Y F L R G S L P W Q G L K A D T L K E R Y Q K I G D T K R A T P I E V L C E N F P E E M A T Y L R Y V R R L D F F E K P D Y D Y L R K L F T D L F D R S G F V F D Y E Y D W A G K P L P T P I G T V H T D L P S Q P Q L R D K T Q P H S K N Q A L N S T N G E L N A D D P T A G H S N A P I T A P A E V E V A D E T K C C C F F K R R K R K S L Q R H K </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, 10% gly, 1 mM DTT, pH 8.0
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Casein Kinase I gamma-2, a serine/threonine-protein kinase, exhibits a preference for acidic proteins, with caseins being
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prominent substrates. Demonstrating versatility, it phosphorylates a diverse array of proteins and actively participates in Wnt signaling. Noteworthy targets include COL4A3BP/CERT, MTA1, and SMAD3. Phosphorylation of SMAD3 serves to destabilize the protein, leading to ligand-dependent ubiquitination and subsequent proteasome degradation, thereby inhibiting TGF-beta responses. Hyperphosphorylation of the serine-repeat motif in COL4A3BP/CERT results in its inactivation, disrupting ER-to-Golgi transport and suppressing ceramide and sphingomyelin synthesis. Additionally, Casein Kinase I gamma-2 plays crucial roles in brain development, vesicular trafficking, neurotransmitter release from synaptic vesicles, and the regulation of fast synaptic transmission mediated by glutamate. Moreover, it contributes to the control of reactive oxygen species (ROS) levels, further emphasizing its multifaceted involvement in cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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